Use Clinical Data to Inform Trial Design and Predict Key Clinical Outcomes:

- Predict combination therapy outcome using monotherapy data
- Predict effect of RAV resistance/fitness on SVR
- Identify early predictors for final treatment outcome
- Recommend design of optimal treatment regimens (dose, frequency, duration) for combination therapy
- Provide modeling support for FDA submission (e.g., optimal treatment regimen, non-inferiority treatment regimens)

Understand Mechanism-of-Action & Biological Effects

- Mechanistic models both summarize biological understanding and explicitly describe underlying mechanism
- Population PKPD w/ multi-variant representation captures wide variations seen in patient responses
- Identify additive or synergistic effect for different drugs
- Maximize utilization of all information (viral load, LOQ, LOD, SVR status, prior outcomes, sequencing info, RAV characteristics)